Distr.
GENERAL

UNCTAD/SDD/PORT/3
24 May 1995

Original: ENGLISH
ENGLISH, FRENCH and
SPANISH ONLY

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

Comparative analysis of deregulation, commercialization and privatization of ports

Report by the UNCTAD secretariat

CONTENTS

Paragraphs

Foreword . . . . . i - v

Chapters

I. Port problems and reasons for reform . . . . . 1 - 15

II. Various reform methods and their interrelation . . . . . 16 - 46

III. Conditions for reform measures . . . . . 47 - 65

IV. Port environment assessment and reform strategy . . . . . 66 - 79

V. Implementation, control and adjustment . . . . . 80 - 90

GE.95-51848

FOREWORD

i. This report was prepared in response to the request of the Standing Committee on Developing Services - Shipping, to undertake a comparative analysis of the port sector and related policies in different countries to determine the factors that contribute to better management, efficiency and sustainable development of ports and related port services. In the last decade, a large number of countries had undertaken or considered institutional reform in the port sector as a means to improve performance and to reduce the government's financial and administrative responsibility. Technical change has also helped to set the stage for reform because of the massive increases in labour productivity and in the increased capital requirements of the port sector. Institutional reform offers the potential to improve the competitiveness of port services and thus strengthen trade capacities. Experience with the various forms of restructuring has shown that improved performance has not always been achieved. Reforms can not be successful unless a number of preliminary conditions are satisfied and the proper strategies and procedures are implemented. Without competition, there is a need to provide some mechanism for price and performance control. Governments want safeguards to ensure that the facilities operate well, that labour and social problems are minimized, that charges are fair, that regulatory control is maintained and that an integrated transport system is developed.

ii. Port institutional restructuring can range from modernization of management to complete privatization, but it should have a single overall objective -- to make the port responsive to the market and thus satisfy clients' needs. Reform will be successful as long as this objective is reached; otherwise, only partial objectives will be achieved, which will set the stage to take further measures to attain the overall objective. This study analyses the reasons for port institutional restructuring, the measures for institutional reform and the conditions for implementation. It assesses the port's environment and identifies the measures needed. It also analyses the implementation, control and adjustment of restructuring measures. This study advocates that restructuring should be progressive.

iii. When discussing institutional reform, there are a number of terms that are frequently used and are defined as follows:

Public sector port: both the port authority and port operations are in the hands of the public sector. This can be as an operating port authority or with port operations undertaken by independent public enterprises.

Managerial improvement: modern management tools are introduced and reform measures are taken to upgrade management at the port level, without modifying existing legislation and regulations at the government level. Performance agreements between the government and the port authority may be used as a motivation method.

Deregulation or liberalization: the elimination or reduction of restrictive rules and regulations in order to liberalize the market and promote efficiency, without necessarily altering the mission and objectives of the port.

Commercialization: when the public sector port management is given autonomy and is accountable for its decisions and performance. Contracting out certain port functions to the private sector is a form of privatization rather than commercialization.

Corporatization: when public-sector organizations are transformed to have the legal status of private-sector companies with the government holding the shares. Enterprises in the commercialization stage do not have legal corporate independence. With corporatization, all land and assets are legally transferred to the company.

iv. *Privatization* has many forms, and in this report is not limited to the transfer of ownership of property and assets from the public to the private sector. Selection of the appropriate form depends on the nature of the activities to be privatized and on the local environment. Privatization in its general form is the transfer of ownership and control of an existing enterprise, activity or service from the public to the private sector. Privatization therefore involves the divestment of the government's interests in favour of the private sector. Privatization is complete when the entire ownership of the government's existing interests is transferred or sold off to the private sector, which means that all land and assets are transferred to full private ownership. Thus the private sector fully controls and manages the enterprise. Partial privatization is a partial transfer, that is only a portion of the ownership is transferred and the enterprise is controlled by the government according to the percentage that it holds. Selective privatization refers to a government agency, with multiple services, that sells or leases some of its services, but retains the remaining services under public ownership, control and management. An example is when an operating port authority sells its towage service to the private sector. Another form of privatization is to contract management services from the private sector, often for a specific period of time. Thus, management contracts and service contracts are a form of privatization. In the port sector, leasing a terminal to a joint public/private entity or a private entity is a frequent form of privatization. Essentially, leasing means renting specific facilities in return for payments over the life of the lease. There is no change in the ownership status of fixed assets that remain with the state, but moveable assets may be sold. Corporatization becomes privatization once the private sector holds some of the shares. Thus, privatization is the transfer of services and/or assets in part or in full to the private sector.

v. The suitability of the various types of port reform will depend on local conditions. Thus, one type of reform will not necessarily have positive results in all situations. Furthermore, it is not relevant or wise to expect that the results achieved in one port will be the same in another; rather, it is important to consider the steps that can be taken and examine the results in a number of countries. Each country needs to determine the steps that are best suited for its port sector, based on both its micro-economic and macroeconomic objectives, bearing in mind the country's economic situation and the national importance of its port sector.

I. PORT PROBLEMS AND REASONS FOR REFORM

A. The global environment

1. At the last meeting of the UNCTAD Intergovernmental Group of Experts on Ports, in October 1993, privatization and commercialization were the topics of discussion that evoked enthusiasm, interest and concern among the delegates. These subjects are topical because of the restructuring of the global economic environment. During the last decade, there has been a worldwide trend of institutional restructuring of the public sector. In some developed and developing countries, it has taken the form of commercialization or privatization of public enterprises. In the former USSR and the former socialist countries in Eastern Europe and Asia, steps have been taken to transform their centrally planned economies into market economies. Globalization of manufacturing and national and international competition have been major motors for these changes. In the past, political decisions have transferred certain economic activities to the public sector. Now, market forces are increasingly being allowed to drive the entire national economy, which often involves institutional changes, away from public enterprise-centered economies.

2. It is within this environment that port institutional reform is taking place. In many developed countries and most developing countries, ports are, in one form or another, public-sector entities. Some countries consider ports as a service sector for the general national economy. Others think that ports are so vital and strategic to the country that they should come under direct public control. Some countries see no other alternative than public-sector involvement since large investments are required for port development. In many countries, it was natural and logical that at the end of colonization, port assets and activities were placed under the control of semi-autonomous public-sector corporations. The public nature of the port sector, together with the serious port problems in some countries, makes the port sector a target for institutional reform.

B. Reasons for change

3. World wide, basic port activities may seem identical, namely, loading and discharging, receiving and delivering cargo, storage, services for ships, etc. However, when comparing the performance of various ports, differences are seen between ports, even within the same region. For example, in Western European ports, the average productivity for container handling in 1991 ranged from 14 to 30 moves per hour per crane. [1] In an Asian port in 1992, 458 containers were handled in 3 ¼ hours [2] and the vessel stayed at berth for less than half a day, while in another port in the region, the same number of containers required a vessel to spend 2 to 3 days in the port. The difference in labour productivity between ports can also be considerable. In a major port in the Far East in 1992, 7,200 employees were needed to handle about 200 million tons of cargo, while in another port of a developing country in the same region, 52,000 employees were needed to handle about 150 million tons of cargo. Low productivity and inefficiency have made some ports very expensive for their clients.

4. These international comparisons were not important when the national policy encouraged import substitution and thus discouraged foreign trade. However, many developing countries want to expand their exports in order to generate additional employment and foreign exchange and to develop their economies. Thus, trade promotion has been adopted as a national economic policy. Poor port performance can no longer be tolerated and governments have realized that the poor services and high costs of their ports are hampering their trade development and national economy. The proportion of port charges in the final delivered cost of traded products varies from 0.2 per cent for cargo of high value to more than 20 per cent for that of low value. As exports of developing countries are often of low unit value, port performance is more important for them than for developed countries. Although more developing countries are entering the world market with manufactured goods, they have often been providing low value-added products and products that compete on price rather than quality.

5. Strong competition in the international market often leaves developing countries with a slim margin of profit. High transport costs or port costs can swallow that thin margin and eliminate the trade. Even if developing countries are competing with developed countries for a market with the same products, the comparative advantage of low production costs can be offset or undermined by high-cost port services. The export of soybeans is an example. In 1991, the international f.o.b. price for soybeans was US$ 230 per ton. However, for loading the cargo on board a ship it cost US$ 65 per ton in a South American port, while it cost only US$ 20 per ton in a North American port. Although the production cost of

---

[1] Hinterland, Port of Antwerp review, 1992; and Ports and Harbors, October 1992.

[2] Port View, Port of Singapore Authority review, January 1993.

soybeans was US$ 165 per ton in South America, US$ 30 cheaper than in North America, by selling soybeans at the international market price, the South American producers made no profits at all (total cost US$ 230), while their North American rivals made a profit of US$ 15 per ton (total cost US$ 215). Poor port services were not only taking the profits from national exporters but, in fact, were also squeezing the country out of the world market.

6. This example also shows that reduced costs of port services not only can save and encourage national trade, but also can create new export sectors that will be competitive in the international market. Many newly industrialized countries have taken steps to improve their port sector, which is directly linked to the national economic development policy. Port performance is no longer a problem for port managers only; the government and traders should also make ports a priority and develop plans to improve them.

C. Causes of the problem

7. High costs, poor services and low efficiency and productivity are symptoms of the problem rather than the causes. When there are problems in the port, the infrastructure and the cargo-handling equipment are often first considered to be at fault. However a recent UNCTAD survey [3] in four African countries (Côte d'Ivoire, Ethiopia, Kenya and Senegal) found that "Investment in modern port facilities has been universally good, and although there have been some minor omissions there are no cases of serious infrastructure defects." If ports have the right infrastructure and necessary equipment, the cause of the problems may be the lack of appropriate management or of modern management know-how. Principles of modern port management [4] require that each port organization, department, workshop, team and staff member should have clearly described objectives and areas of authority and responsibility and be accountable for its performance. Modern management includes adequate rules and regulations, good statistical and information systems, analytical accounting and cost control and human resource development, etc. Today, in most cases, managers know these techniques well and many have been put in place. In industrialized countries, ports normally have modern management systems, but there are still differences in port performance. In fact, knowledge of modern port management has been disseminated in developing countries through various training activities during the last decades. In many ports of developing countries, there are managers who have been trained abroad in modern port-management techniques, and thus the problem is not the lack of these techniques, but their implementation. Improved management is often unable to touch the roots of the problem.

8. The study of the four African ports found that the real causes of the problem were institutional. The interface between the government and the port was too heavy and managers were unable to manage the port commercially. The lengthy bureaucratic procedures and unnecessary state intervention prevented management from streamlining operations and reacting quickly to market needs, which often delayed the implementation of needed changes. When changes were made, they were often either not enough to satisfy market needs or they were too great to be cost effective to clients. Decision makers were often more responsive to a political or administrative hierarchy than to market requirements and thus were interested in noncommercial objectives. Over staffing resulting from technological changes or government policies can increase port costs, but this problem cannot be solved by management because

---

[3] *Human Resources and Institutional Development in African Ports*, UNCTAD/UNDP report prepared for a technical cooperation study, 1989.

[4] UNCTAD, *The principles of modern port management and organization*, (TD/B/C.4/AC.7/13), 1992.

legislation, social objectives and further constraints are imposed on ports. In many ports in developed countries, labour regulations have resulted in excessive labour and labour unions that are not market oriented. For example, in Japanese ports there is no Sunday working and costs are high in the major ports, so shippers and shipping lines are using smaller Japanese ports to ship their cargo to Korea, Taiwan or Hong Kong on onward shipment rather than to the major Japanese ports and thus there are significant savings. Negotiations have started with stevedoring unions to reduce costs and revise the working system. Problems also arise when relations between clients and service providers are severed by bureaucracy. When the market attempts to punish ports for not fulfilling its needs, the ports are not threatened because they benefit from government protection (by having a monopoly or financial subsidy). *Thus, the cause of many port problems is that management has been separated from its clients and the market*. In many cases, the relation between the ports and the market has been distorted or interrupted by their institutional structure. Therefore the solution is to modify the structure.

D. Objectives of port reform

9. *The general objective of port restructuring is to make port management market oriented and thus enable it to satisfy its clients' needs, subject to meeting its financial objectives*. This objective may seem to be abstract, but it is important for the success of any port reform. The notion of the market is extremely important in the analysis as well as in the restructuring process. Throughout the world, there are both successful and unsuccessful ports with various kinds of structure and management style: the port can be big or small, landlord or operating, public or private. However, successful ports have one thing in common -- they all are highly market-oriented, while unsuccessful ports are not.

10. Efficiency is too narrow a concept to be considered as a general objective of port restructuring. A port can provide efficient services that clients do not need, and not provide those they do need. While cost-effectiveness is a measure of efficiency, there are other services that the market requires. Awareness of actual and potential market possibilities and requirements, flexibility, responsiveness, reliability, friendliness, etc., to mention only a few, are nowadays important requirements of the market, but are not necessarily reflected in the concept of efficiency.

11. Other more specific objectives are indispensable for developing a strategy and implementing a project. However, none should substitute, override or undermine the basic objective of responsiveness to the market. For privatization, in many cases, to secure financing is an objective of port institutional reform. The government and the port authority lack the financial resources for new port projects and try to attract private capital. However, if this is the general objective, their attempt will probably fail. If the port is not financially viable under the public sector, the private sector is unlikely to invest. To involve the private sector, other market-oriented changes need to be implemented. If public sector ports are not profitable, it may not be possible to privatize them unless and until action has been taken to remove the causes of their losses and then to make them profitable. Thus, it may be necessary first to deregulate and commercialize ports, regardless of whether they are subsequently privatized. If ports are profitable over the long term, it is not because they have been privatized, but because they have satisfied the market. In other words, ports cannot make money for their development often because they have failed to adapt their organization and management to the market's requirements.

12. An example in a developing country of Asia illustrates this. Its ports had not been generating enough money to finance new developments. The government took a significant step by allowing the introduction of private capital and expertise from outside the country into one of the country's major ports

through the formation of a joint company. However, before investing, the new company first reduced the number of staff by half and increased the handling charges by 50 per cent. The port's financial situation immediately improved, and productivity increased even though the staff complained and the clients protested. The new company had reacted to market forces by improving performance and by setting charges related to actual costs. The managers of the old company said that, had they been given the authority, they also could have solved the port's financial problems. Therefore, it is important to keep in mind the general objective of port institutional reform, which is for the port to satisfy the needs of the market and its clients.

13. The specific objectives of port restructuring vary greatly. The most important is to enhance the efficiency of port services. Some ports called for institutional reforms, such as deregulation or privatization, to diversify services or reduce costs. Financial sustainability has been a specific objective for many ports, either to alleviate the government's financial burden for the ports that are losing money, or to obtain new financial sources for development projects that the government finds difficult to finance. The following are some specific objectives for port institutional reform:

- to enhance the efficiency of port services;
- to diversify port services and promote competition;
- to reduce the costs of port services;
- to promote the port in the market;
- to facilitate organizational streamlining;
- to acquire management expertise;
- to find new financial resources for development;
- to strengthen entrepreneurial and managerial capacity;
- to ease the introduction of modern management methods;
- to solve/improve labour problems;
- to relieve the government's financial and administrative burden;
- to eliminate/minimize bureaucratic/political influence;

14. All these specific objectives are directly linked with the general objective to enable the port to satisfy the needs of the market and the clients, and they are all economic objectives. In addition, there are some other objectives set by the government that may not be directly linked with the general objective. Normally, these objectives reflect the government's political policy. Some countries in transition from former centrally planned economies to market economies, for instance, have adopted a policy of developing the private sector as the engine of growth and have made privatization the end objective. Other countries focus on the internationalization of public firms even if they are already market-oriented. In ports, there are particular objectives for privatization programmes. For instance, the Government of Singapore announced in 1992 that the Port of Singapore Authority (PSA) was to be privatized.[5] Although the PSA is a public entity, the decision was not based on improving market orientation or efficiency of port management, as PSA has been client oriented and is one of the most efficient ports in the world. The Government's objective was to promote the growth of the country's capital market and to broaden and democratize the ownership of the port along with other large national enterprises.

15. The setting of clear objectives is an important first step for the reform procedure to succeed. The general objective keeps all actions on track, while the specific objectives enable managers to adopt the

---

[5] *Singapore will sell more shares in port authority, other boards*, The Journal of Commerce, 19 August 1992.

right strategy and measures for implementation. The general objective is fundamental and constitutes the final criterion for any restructuring activity. This means that a port reform action is only successful when the general objective has been reached or, in other words, when the market needs have been fulfilled and the clients are satisfied. The general objective is meaningful only when the port's goal is market oriented, for example, "to be a financially viable international hub port". If its goal is primarily of a political or social nature, such as "to be a major provider of employment in the region", then the general objective would be different. The general objectives usually involve the ports in carrying out market-related functions, consistent with their financial viability, or in contributing to wider national or regional economic goals, as directed by the government with appropriate adjustments to the port's financial objectives.

II. VARIOUS REFORM METHODS AND THEIR INTERRELATION

16. As the general objective of port institutional restructuring is to enable the port to respond to the market and to satisfy the client's needs, the market and the client's needs are examined briefly in order to analyse the various options. An open and complete market is one where market forces can be fully exercised, which means that there is free and fair competition to meet demand. Good services providers will be rewarded while poor providers will be punished. A market without competition is a distorted market. Therefore, it is an open market that port reform seeks to create. However, there are situations where there is no competition, for example, a port serving a hinterland that is isolated from other ports by the lack of inland transport, but in these situations ports should still respond to client requests while meeting their performance and financial objectives.

A. Managerial approaches

17. As explained previously, ports that intend to embark on institutional reforms have, in many cases, already undertaken some managerial improvement measures to introduce modern management techniques, which have two advantages. First, even if there is no institutional restructuring creating social changes, managerial measures can still have positive results on port performance. For example, in the port of Casablanca, operations were streamlined by setting clear objectives for each department and working team, and a new statistical system provided port managers with the means to have more efficient control. The second advantage is that these techniques form a basis for further institutional reforms. It is difficult to improve port services using institutional methods when basic management systems have not been adequately developed and modernized.

18. Experience has shown that most modern management methods used in other sectors, such as the manufacturing sector, are applicable in ports as well. For example, management by objectives, cost control, quality control and rationalized organizational structure, has proved to be an effective means to improve port management. In the UNCTAD study, *Principles of modern port management and organization*, major management tools were discussed. One principle is to take decisions at the level where problems arise. This often implies the need for *decentralization*, which is particularly important in the analyses of institutional reforms.

19. The difficulties connected with the quality of port decision-making are often due to the great distance between the place where the problem arises and the place the problem is solved. When the general objective is to satisfy port clients, the reason for decentralization is evident. If those who are in direct contact with clients cannot take decisions, that principle will not be realized. Administrators from

centralized public port systems rarely take decisions without the consent of officials at the ministerial level, and they often have a relaxed attitude regarding commercial matters. In UNCTAD's case studies of four ports in Africa, it was found that the good intentions to improve port performance, in most cases experienced implementation problems or were overladen with subsequent controls. The impact of these controls has varied from minor management inconveniences to serious delays in decision-making. An unwillingness in the middle ranks of central government to delegate authority to the port organization has been one of the major reasons for the problem,[6] and in order to overcome it, a strong commitment at a higher level in government is required.

20. Another major problem with decentralization is that of appropriate and effective control. When the decision-making power, hopefully together with responsibility, has been decentralized, control will be needed to ensure that correct decisions are taken. Such control can be regulation based or market based. If neither exists, problems will occur and the decentralization efforts will be stopped again by centralizing decision-making. Market control is dealt with in the sections on deregulation and commercialization.

21. One method of implementing managerial improvements is performance agreements. These are agreements between the government and the port authority where performance expectations, functions, responsibilities and rewards of all parties concerned are specified. Obviously, performance expectations are related to market needs. Responsibility is transferred to the port and their results measured to determine the rewards. The Ghana Ports and Harbours Authority used this method successfully, and the clients, the Government and the Authority were satisfied with the results.

B. Deregulation

22. Obviously, decentralization is an effective method to restore the freedom of port managers. Countries that have not done so would achieve improvements by decentralizing the decision-making power to the port level and to levels that have direct contact with clients. However, decentralization alone cannot solve the problem of motivation. Having power does not necessarily mean using it. In many cases, doing nothing is safer than doing something. And having the power does not necessarily mean using it for the good of the port: power and authority can always be abused. For instance, reformers in China, and in many other countries as well, were caught in the decentralization/re-centralization cycle. Once decentralized, power and authority were abused, disorder occurred, control was called for, and then the power and authority were centralized again and the situation returned to its original state. Then, another cycle started and the scenario repeated itself. This is a common situation in many developing countries where legislation is inadequate and a market economy mechanism has not been set up. The old system of control had been given up before a new one was created.

23. It is essential to establish a mechanism of effective control that not only provides freedom for managers, but also creates incentives and motivation. There are a number of ways to achieve this depending on the nature of the organization: for example, the army uses discipline and governments use regulations. For an economic and commercial organization, such as a port, whose general objective is to satisfy market needs, the most effective way is to use market forces. Ports are operating more and more in a competitive market where decisions taken by owners and/or managers lead to full and often

---

[6] *Human Resources and Institutional Development in African ports*, UNCTAD/UNDP report prepared for a technical cooperation study, 1989, p.3.

quick market reactions. The principle of market discipline is that managers who take good decisions are rewarded by more business and profits, while those who do not take any decisions or take bad decisions, are punished by financial losses and even bankruptcy. This market-related incentive is strong enough to make a port efficient -- the most efficient ports are all driven by that force. However, this market discipline functions only when there is competition. Therefore, before relying on market forces, one must ensure that the market itself is healthy. If not, competition, to the extent possible, has to be introduced first.

24. Deregulation is a method that restores competition to a market that is distorted by excessive regulations. In this study, deregulation does not mean the total elimination of government regulations, but only those related to competition (not with health/security or environment protection). Deregulation may relate to interport competition for cargo, port charges, port labour and investment in ports and port facilities. For example, in the United Kingdom, under the regulatory framework of the 1964 Harbours Act, only limited port investments could be made without the Government's permission, until the restrictions were eliminated in 1985. It is beneficial to a country to remove the regulations that restrict, limit and prohibit competition by controlling entry, exit, prices, etc., and often lead to non-commercial operations. However, regulations should be reinforced where a natural monopoly exists which is difficult to break.

25. There are often numerous government regulations, policies and union agreements that permit ports, or those providing services at ports, to maintain their dominant positions by eliminating all vestiges of competition. These regulations should be modified or removed to create a competitive environment. In Chile in 1981, the Government ended stevedoring and land-side cargo handling monopolies, as well as the distinction between those activities (by adoption of law 18032). Port employment was opened to all workers who met the age and physical requirements. Private stevedoring companies were allowed to establish themselves and were free to negotiate with individual trade unions on manning levels and salaries. It was estimated by the country's Maritime Chamber that this deregulation benefited Chilean exporters and importers by US$96 million in 1990 alone.[7]

26. The deregulation of port labour in the United Kingdom in 1989 had a massive impact on the industry. Under the National Dock Labour Scheme that guaranteed employment, if port employers went out of business, their employees were transferred to surviving employers and, ultimately to the port authority, as the employer of last resort. With the abolition of this scheme, the new employment flexibility allowed the industry to improve its port-operating efficiency and to create additional capacity at heavily used facilities, which has affected port routings and made it possible for ports with underutilized facilities to attract traffic from other ports. Deregulation also improved financial viability, which made it possible to attract investment. Italy and France also abolished the law that reserved work in the ports for specific port-workers' organizations. Handling firms can now employ their own personnel and are no longer obliged to hire members of dockers' organizations.

27. As national port policy aims at long-term benefits for the country as a whole, the government should encourage interport competition at national or international levels. In any case, before taking a decision to restrict interport competition for economies of scale, research and comparative studies should be done to measure the overall and long-term gains and losses for the country's economy when there is competition, as compared to the results when there are restrictions.

---

[7] ECLAC, *The restructuring of public-sector enterprises: the case of Latin American and Caribbean ports*, (LC/G.1691-P), 1992, p.29.

Box 1. Example of promoting competition within a port

In 1994, the Antwerp City Council confirmed the decision to award Noord Natie and the Belgian railways, SNCB, a 50-year lease to operate the new terminal on the River Scheldt. The port authority made two comments: (1) "As a medium-sized container stevedoring company, Noord Natie is considered to be most likely to maintain competition within the port and to strengthen the port as a whole." (2) "The application of Hessenatie (largest operator) was considered to be less appropriate since Hessenatie already has a concession on the first Scheldt terminal and would thus acquire too dominant a position."

Source: Containerization International, May 1994.

28. Within ports, competition should be allowed in three areas: port services, labour and pricing. The Chilean example shows that loosening or removing restrictive regulations can stimulate sufficient numbers of small companies providing services, such as warehousing, transport, stevedoring, etc. As a competitive environment is built, benefits accrue quickly to the users. Labour-related deregulation, is in numerous cases, the most crucial part of port reform. In France, for example, abolishing some labour laws which had allowed dockers a special employment status and updating others, has brought positive results in some French ports, such as in the ports of Dunkirk and Rouen. In the latter, the terminal handling charges dropped between 10 and 22.5 per cent after the dock labour system was deregulated.[8] Recently, in Brazil, efforts have been made to deregulate the port sector. A new bill has been prepared with the following objectives: to end the stevedores' and port-workers' monopoly of the port sector; to give more freedom to the operations of the private maritime terminals; and to restructure the public ports with the possibility to privatize the services.

29. However, deregulation is only an act of removal and does not imply modification, and even less, creation. Deregulation is also considered as a process of liberalization of the management of enterprises and of the whole economic system from bureaucratic regulations. This generally brings satisfactory results, as long as the market mechanism works and the general interests of the society are not at stake. Nevertheless, safeguards may be needed to prevent ports or port operators from misusing their monopoly position in relation to port charges. For example, in the United Kingdom during the deregulation phase of the 1980s, the right to appeal certain port charges was widened. But it is unwise to use another's experience without assessing the characteristics of one's own environment.

30. In many countries, ports have been operated for a long time as administrative entities. Port infrastructures and superstructures often belong to and sometimes are operated by the port authority. Deregulation will not automatically attract competitors. In many developing countries, competition is not only restricted by regulations or market size, but also by the lack of competitors due to limited financial resources and management know-how. After deregulation measures have been put in place and efforts made to restore competition, no new entity may develop that can compete with the monopoly or force it to change. Often, the old organization is too well established to be changed by market forces alone, which are very weak in most developing countries. Therefore deregulation measures are not always

[8] *ROUEN PORT - The Port of Rouen Authority Newsletter*, No.98, Spring 1994.

sufficient. In many cases, more active reforms, accompanied by deregulation, need to be initiated by the government.

C. Commercialization

31. Ports may not meet market requirements because market-oriented economic objectives are not their principal goals. In some countries, ports are expected to pursue micro-economic market objectives, but in others macroeconomic objectives are more important. Thus the port's contribution to the economy or employment may be more important than financial viability. Some countries subsidize infrastructure while operations are carried out on a commercial basis. Therefore, requiring ports to follow economic objectives and adapting the port organization and management to be in line with commercial requirements and market needs is a way to solve the problem. This process is called commercialization and has led to valuable experiences for some countries' port sectors.

32. In the United Kingdom at the end of 1962, a centralized organization was broken up into several state-owned but separate corporations, one of which was the British Transport Docks Board (BTDB). It initially owned and operated some 26 ports that handled approximately one quarter of the foreign trade in the United Kingdom. From the outset, the BTDB ports were decentralized, with considerable autonomy for day-to-day management given to individual docks managers, who were responsible for their ports' financial performance, and who therefore took an active interest in their ports' operational and financial aspects. As a consequence, the BTDB was consistently profitable which made its privatization possible in 1983.

33. In New Zealand, a Ports Reform Bill was enacted in 1988 which required every harbour board to form, under the general companies legislation, a company with shares. The operation of the port's commercial facilities passed to that company with strictly commercial goals. Only months after the port companies had been established, the work force was reduced by almost 40 per cent and vessel turnaround times were cut by 30 to 50 per cent. The whole structure of the industry changed, with shipping lines negotiating individually with terminal operators (instead of with the national board). Although still 100 per cent a public entity, the port of Auckland claims an average container handling rate of 34 to 37 TEU per net crane hour and a productivity improvement from 6,600 tonnes per employee in 1989 to 13,900 in 1992. Its average turnaround time was cut from 38.4 hours to 15.7 hours for container ships, and from 3.4 days to 20 hours for other ships.[9]

34. Commercialization has been a satisfactory alternative in a number of developing countries as well. In 1984, Morocco implemented a port policy which consisted, on the one hand, of entrusting the port authorities with tasks that fell within the administrative sphere; and, on the other hand, of establishing a public sector agency, Office d'Exploitation des Ports (ODEP) to carry out tasks in the commercial sphere. ODEP, set up in 1985, is, in fact, a public enterprise functioning on an "industrial and commercial basis". Management authority was decentralized from the ministry, market-oriented objectives were established and effective control mechanisms were created. After the port commercialization reform, significant improvements occurred in Moroccan ports. Since 1989, cargo handling productivity

[9] *Proud Record*, Cargo Systems, August 1993, p.101.

has increased by 50 per cent in all sectors. In Casablanca, the country's major port, productivity improved 150 per cent in 1993. Vessel waiting time has been reduced to almost zero in all ports. The image of Moroccan ports among their clients has now completely changed. Due to their achievements, the Moroccan Government also transferred the operation of several fishing ports to ODEP in 1991.[10]

35. Port commercialization works because it allows the port to fix its objective on market needs and client satisfaction. However, the former Director General of ODEP stated that the most difficult part is not successfully introducing changes, but maintaining motivation and dynamism. ODEP adopted two methods to sustain the improvements after commercialization. One was to promote and use "private-type" management, and the other to create "fictitious competition". The so-called "private-type" management involved implementing a series of modern port-management tools, such as cost control, financial audits, rigorous personnel policy and performance monitoring. Perhaps most important is that the Government and ODEP established a management contract which gave ODEP clear objectives and responsibilities and its management a high degree of freedom and autonomy. The creation of fictitious competition in the port sector with a kind of "natural monopoly" situation is not easy. To do this, ODEP periodically compares different ports on the basis of their productivity and their client's relations. Comparisons, or "competition", are also made within the same port among various production centres, which have been created as autonomous entities. The comparison is done by the general manager's office, using standards based on market requirements. Rewards and sanctions are also used.

36. There exists another kind of commercialization in some industrialized countries. In Belgium, port authorities will soon be commercialized to become company-like organizations, and will have a board to take important decisions. Private companies will be encouraged to participate in the ownership although the majority of shares is expected to be in the hands of the public sector. In Denmark, a new act came into force in October 1993 which made the port of Copenhagen a proprietary institution that must be financially self-supporting. In Italy, reforms are under way to make port authorities state-owned landlord entities with some private participation -- overseeing port management, but not responsible for the day-to-day operations.

37. It is sometime difficult to commercialize ports when the public sector is in charge of operation and management. Some ports were unable to implement the commercialization programme and in other ports, the benefits of commercialization did not last. The reasons are complex. Many think that a port can eliminate its bureaucracy and become totally market-oriented by involving the private sector in its management. As described previously, clients are satisfied when they are able to select their own suppliers (of products or services) in a free market. Such competition makes suppliers responsive to the market through rewards and penalties or, in other words, through profit and loss, including the threat of bankruptcy. One reason that the public sector often fails to serve the market well is the fact that it is not faced with bankruptcy because it has government support and so is less sensitive to market penalties. Consequently, the commercial discipline and market force work best with managers whose success is determined exclusively by their performance. Almost all port managers in the private sector are in such a position, but only a few in the public sector. This is the main reason that the private sector is more likely than the public sector to be efficient and why an increasing number of governments are turning to the private sector.

---

[10] See UNCTAD, *Port administration and organization: A noteworthy experiment in Morocco*, (UNCTAD/SHIP/627), 1989; and a paper by Mr. M. Hassad presented at the UNCTAD meeting of the Intergovernmental Group of Experts on Ports, Geneva, October 1993.

D. Privatization

38. All the measures previously analysed seek to make the port more responsive to the market without changing the public nature of the port management with managers and employees working for public companies. Privatization means gradually transferring the management, development or ownership of basic port functions or assets to the private sector. Privatization involves private companies and private capital. It redefines the port authority's role by disengaging the public sector from activities which are best done by the private sector. Port privatization is foremost a political decision, although it has to be carried out as an economic exercise. It depends on government policy rather than on the wishes of port managers.

39. Privatization is a broad concept that embraces a large variety of practices -- from a simple lease contract to a private company to a complete sell-off of port assets and capital to the private sector. Again the critical point is that the private sector is fully exposed to market rewards and penalties. Privatization can also be undertaken through management contracts with an individual or a private or semi-public organization. For example, the ports of Dammam and Jeddah in Saudi Arabia, and Fujairah in the United Arab Emirates, are managed by private foreign port-operating companies under management contracts.[11] An investigation by the UNCTAD secretariat in 1993 found that there were at least 31 countries in the process of port privatization in one form or another. Many more countries, obviously, are interested in the experiences gained in this field. As regards the degree of private participation, port privatization can be divided into two categories: privatization with the public sector playing a continuing role; and privatization without public involvement. Port functions, superstructure, infrastructure or even land can be leased or sold to either public/private joint ventures or private companies.

1. Public/private joint-venture options

40. Many countries with port privatization have adopted public/private joint-venture options, which means that the public sector remains in the organization after privatization. One of the most notable examples of port privatization is Port Klang in Malaysia. In 1986, the operational services of the container terminal of Port Klang were privatized. Tenders were called from local interested parties based on specific terms of reference and the container operations were awarded to Kelang Container Terminal (KCT), the first port-operating company in Malaysia which was set up as a joint-venture between the Klang Port Authority (KPA) (49 per cent) and Konnas Terminal Klang (51 per cent), a joint-venture between a state-owned container haulage firm (80 per cent) and a private shipping line, P&O Australia (20 per cent). KCT bought the non-fixed assets, such as cranes and equipment, but leased the fixed assets, such as quays and land, for 21 years. After privatization, KCT took over all container operations previously operated by KPA. According to KPA's director, the general performance at the terminal improved by between 15 and 20 per cent. The terminal operator, who is independent and has the freedom to respond to the market, has been able to upgrade the container terminal to meet the demands of growing trade.[12]

---

[11] World Bank, *Port administration: should public ports be privatized?*, Z. Ra'anan, Working Paper, 1991, p.15.

[12] Information on Port Klang privatization has been gathered from the presentation paper of Mr. Rajasingam, Director of Klang Port Authority, at the UNCTAD Intergovernmental Group of Experts on Ports in October 1993; Port Development International, January 1993; and *Privatization in Port Klang*, Lloyds List Maritime Asia.

41. Two lessons can be learned from Port Klang. One is that the public sector initially remained an important player: private-sector participation in the new organization was only around 10 per cent (which rose at a later stage). The other is that several privatization forms were used; for instance, the fixed assets were leased to the joint-venture company, but the superstructure and equipment were sold to it. Port joint ventures may be attractive to both the government and the private sector because the government can reduce administrative and financial burdens, improve efficiency and promote competition. Joint ventures are viewed favourably by the private sector where the magnitude of the investment and commercial risks are beyond their capabilities or where complete ownership of assets and operational control by the private sector are not allowed. In the port of Bremen, Germany, most cargo handling is carried out by a joint-venture company formed by the city of Bremen (51 per cent) and the private sector. The same formula can be found in many other developing countries, such as the port of Shanghai in China (50 per cent private ownership in container terminals for a 50-year joint venture), the port of Saigon in Viet Nam, the port of Szczenin in Poland and the Marsaxlokk Freeport in Malta, etc..

2. All-private options

42. There are well-known examples of complete port privatization, particularly in the United Kingdom. For example, the port of Felixstowe has never been owned by the public sector. In 1983, the British Government privatized the country's biggest port authority, Associated British Ports (ABP), which owned 22 ports throughout the country. Initially, the Government retained about half of its share capital, but in 1984 publicly sold all its shares to private shareholders and ABP became a wholly private-owned port organization.[13] Since the abolition of the National Dock Labour Scheme in 1989, there have been a number of port privatizations. In some cases, where a company has been privatized by the floatation of shares on the stock exchange, a certain number of shares are made available at no charge to employees, who can purchase a limited number of shares on a special basis. Port shares have substantially increased in value since their issue, and to the extent that they have been held by employees, have had a beneficial effect on work attitudes. There have also been examples of management/employee buy-outs (MEBOs), e.g. the Port of Tilbury London, Ltd.. Between the management contract and total sell-off is the lease or concession of terminals or port services to private operators, which is the current practice in most ports of the United States and Western Europe. In all these options, the privatization of operations is 100 per cent, which means there is no public role left in the new organization.

43. Although there are variants in each form of privatization (for sell-off: selling to institutions through competitive tender or negotiated sale, or to the general public via public issue or offer of shares; for lease: different leasing periods based generally on the superstructure and equipment covered by the lease and conditions -- flat rate, min-max, or shared revenue), there are two major kinds of option that governments can choose when privatizing ports: to choose among different degrees of public involvement in a partially privatized port organization; or to choose the appropriate privatization form, mainly lease or sale, for various services and properties.

E. Interrelationship of various reform measures

44. Four different measures most commonly used in port reforms have been examined, namely, managerial approaches, deregulation, commercialization and privatization. These measures are not

---

[13] *Port privatization - the UK experience*, Port Development International, January 1993, p.53.

independent of each other but are in fact interrelated. No two ports in the world operate under the same conditions. The reason that one measure rather than another is used and leads to positive results is because the port environment is particular in a way that only specific measures are likely to work. However, all port reforms should have the same overall objective, which is to satisfy the clients' needs, although each port reform has its own subobjectives.

45. The objective of a port reform should not be confused with the measures taken. The goal should not be to privatize the port merely for the sake of privatization. It is evident that guidance for any port reform is the overall objective and the only criterion to judge the effectiveness of a measure is the attainment of this overall objective. Suitable measures will depend on the circumstances and conditions of the port and no measures can be implemented easily. Generally, the difficulty of implementation varies from one measure to another. The managerial approach normally requires less radical changes at the institutional level than other approaches. Deregulation implies changes in government legislation and affects the interests of specific social groups. Commercialization, and especially privatization, are the most radical reforms and often face the most difficult obstacles; therefore they require the highest level of commitment, consensus, skills and time.

46. The various examples cited in this chapter demonstrate that port reform can be successful by using appropriate measures. A measure is appropriate as long as the general objective, with sustainable improvements in services, is attained. Figure 1 shows the interrelationship of different measures according to the degree of difficulty for their implementation. Each measure could allow the port to achieve its objective of becoming an efficient port with satisfied clients. Efficiency and satisfaction are measured by a combination of vessel turnaround time, port costs for vessels, cargo handling charges and cargo security and dwell time.

III. CONDITIONS FOR REFORM MEASURES

47. As stated previously, different implementation measures have different levels of difficulty. In fact, not all ports prefer the easiest way to embark on their port reforms. Some ports start with commercialization, while others, realizing that radical changes are needed, may start with privatization. However, *the choice of the measures mentioned above is limited*; specific conditions are required for each measure to be implemented effectively. While there are countries where port reform has been very successful, there are also less successful examples. Most failures occur because conditions were not right when the changes were introduced.

A. Conditions for management modernization

48. Managerial improvements are normally initiated, planned and implemented at the port level and often within the organization. Usually, no special political or social conditions are required for their implementation. A better system of responsibility, management by objectives, total quality control, establishment of production/cost centres, better information systems to name just a few, can, in most cases, be introduced by the port itself without necessarily relying on government support. Moreover, the social impacts of such measures are limited. Managerial measures are easier to understand and implement if similar measures in other industrial or service sectors have proved successful. However, changes are more often resisted than welcomed and conservative tendencies are the most common obstacles. **Education and training** are important factors, and **a strong management team** and **good internal communication** for consensus building are also essential. Steps must be introduced to identify

tasks with the staff, to give them more autonomy and authority and make them accountable for their activities.

B. Conditions for deregulation

49. The removal or reduction of restrictive government rules and regulations will create greater economic and social consequences than simple managerial approaches. In the port sector, there are restrictive regulations mainly on the supply of services and demand, tariffs, scope of activities, operation procedures and employment matters. An important condition for the deregulation of service supply is to have at the same time the **deregulation of service demand**. In some developing countries, there are restrictions not only on the supply of port services, such as cargo handling and stevedoring, but also on the demand for services, for example, through central shipping units. If users do not have the free choice of ports and operators, the liberalization of supply will have a limited effect.

50. The deregulation of port tariffs is recommended only when **the market is or will be competitive**. Deregulation does not mean giving up all control, but replacing regulation control with market control. Competition is the only means by which the market control of prices will work. In the absence of competition, deregulation of tariffs may be harmful to clients. Rather than regulating port tariffs, a system can be introduced where port users have the right of appeal to a specified organization, which has the right to hear such appeals.

51. Deregulation of employment may have impacts on port workers. In many countries, especially in some European and Latin American countries, dockers have a special status and are traditionally protected by law. In France and Italy, the deregulation of labour has been a slow and hostile process, and has required difficult negotiations with organized labour. In Chile, the United Kingdom and New Zealand, successful deregulation of port employment has had a decisive role in port reforms. In the United Kingdom, the abolition of the National Dock Labour Scheme led to severe reductions in labour, positive changes in employees' attitudes, increased volumes of traffic and improved financial viability of ports. Conversely, some South American countries have found that the port labour market is too difficult to deregulate. **Government commitment** is one of the key conditions to employment deregulation. Another is that, when the country plans to deregulate its overstaffed port labour market and foresees large labour reductions, either the national/local **unemployment rate is low** (as in some Asian and South American countries) or an acceptable **social security system** exists and the port and government compensate lay-offs by a payment package (as in New Zealand and France). Without these conditions, there may be too many negative social impacts for successful employment deregulation, and therefore massive lay-offs should be avoided. **Training and reorientation** are alternatives where a third-generation port can create other value-added logistic activities to absorb lay-offs from traditional port activities. In fact, deregulation of labour may even attract ancillary activities into the port area as cheaper labour becomes available.

C. Conditions for commercialization

52. In 1975, the Government of Brazil created a public-sector port enterprise (PORTOBRAS) to carry out activities related to the construction, administration and operation of ports. However, without the deregulation and decentralization of port operations and the shifting of dock workers from a bureaucratic to a market-oriented labour regime, the enterprise was unable to attain its goals and was abolished in

1990.[14] The example of ODEP also shows that the commercialized port organizations should be given **full management freedom**, rights and responsibility if they are expected to satisfy their clients. The port of Singapore is a fully commercialized public port. The PSA is independent of the Government and has developed its own corporate goals and performance indicators. Management is able to restructure the organization to meet PSA's objectives and the clients' needs. Salary scales can be set and, subject to appeal, the right to dismiss unsatisfactory employees is granted. Tariffs can be revised at will without ministerial approval.[15]

53. Although **deregulation and decentralization** are often the first conditions for commercialization, the relevant national **legislation** is also important. In the United Kingdom, the British Transport Docks Board was required to limit its objectives to fostering the well-being of its ports, except if directed to do otherwise. This meant that the organization was decentralized, with its ports under the day-to-day control of port managers who had a large degree of autonomy but who were also responsible for their port's financial performance. Commercialization is normally less difficult in countries where the private sector plays an important role in the national economy and where an appropriate legal framework is already in place to govern commercial enterprises. In other countries, especially in those of former centrally planned economies, there may be no such legal systems. In this environment, commercialization may create disorder and the government may have to introduce new regulations and administrations.

54. A **competitive environment** is another essential condition for commercialization. The competition can be international, national or local, or can even occur within the port between different operators. Sometimes commercialization can create a competitive environment, as in ODEP in Morocco. Commercialization, like deregulation, allows the market to be the controller of enterprises.

D. Conditions for privatization

55. As stated earlier, privatization is as much a political process as an economic one, and thus **strong government commitment** is an indispensable condition. In all successful experiences, whether in the United Kingdom, Malaysia, New Zealand or elsewhere, governments have had decisive roles. Some failures in port privatization were either due to the government's commitment not being strong enough or there were too many changes in government and its policy. Privatization is the most radical and profound form of port reform and affects the interests of various groups which are often extremely strong, such as trade unions. Without strong government commitment, it would be better not to start at all. As the influence of privatization goes far beyond the interest and responsibility of one ministry, the government commitment is not only that of a single ministry that is responsible for port affairs (the ministry of public works or communications, for example), but rather the whole government, from the prime minister to every government agency. This depends largely on the country's macroeconomic policy and whether it is market-oriented. If not, privatization will be more difficult.

56. Privatization needs to have a **broad-based consensus among the parties affected** (bureaucrats, managers, workers and the public at large) on its objectives and a general social acceptance for its implementation. As stated by the director of ODEP, commercialization and not privatization was adopted

---

[14] ECLAC, *The restructuring of public-sector enterprises: the case of Latin American and Caribbean ports*, (LC/G.1691-P), 1992, p.24.

[15] *Restructuring port operations in the Asia-Pacific region*, P. Rimmer, IAPH publication, 1993, pp.10-11.

as a reform measure mainly because there was a lack of consensus on the privatization option. Such consensus can only be built over time. Experience shows that other milder reform measures, such as managerial modernization, deregulation and commercialization, are valuable procedures for building the consensus needed for privatization.

57. **Defining clear general and specific objectives** is another important condition for successful privatization. Although a number of objectives may be established, there should be only one general objective for privatization and that is to satisfy the needs of markets and clients. In some Central and Eastern European countries, privatization itself is considered an end objective. The process is sometimes so politicized that the economic goal is almost overlooked. Guided by the wrong objective, radical and often inappropriate measures have been taken, which have led to the failure of the whole privatization programme. The real question is not who has ownership of port equipment and facilities, but whether or not the equipment and facilities are utilized in a way that clients are satisfied. Clear and specific objectives should be established so that the nation and the port can develop a strategy and an implementation plan. They need to focus on particular domains such as financial, technical/managerial, commercial and especially social and labour relations. The specific objectives may sometimes conflict. The resolution of conflicts also varies from country to country, although two general principles are applicable: specific objectives should be subordinate to the general objective; and long-term interests should never be sacrificed for short-term gain.

58. The port or port service being privatized must have or be seen to have, the potential to be **financially viable**. This is essential if the government wants to attract the private sector to make investments. Commercialization and deregulation are likely to be preconditions for successful privatization. Deregulation, which allows the private sector to reduce the number of employees and thus reduce labour costs or to increase tariffs, may thus be required to interest private investors.

59. Whether it is a lease or a sale, privatization normally means a transfer of rights and responsibility to private companies. In exchange for this transfer, the port organization obtains the private market dynamism, the private management know-how and/or the private investment capability. Therefore, one of the major conditions for privatization is to have **a strong and capable private sector**. Unfortunately, in many developing countries and former centrally planned economies, the private sector is generally small. Also, the stock exchange has limited capability or it does not exist at all. Private capital strength in these countries is mostly limited and market-oriented management capability is weak. In these cases it is advisable not to sell, lease or contract out the port to the local private sector. The initial privatization experience in Poland (Gdansk and Szczecin) resulted in neither the necessary investment capital, nor managerial know-how, but only transferred control from the public to the private sector. To overcome this handicap, countries can either take milder measures (e.g. deregulation, commercialization), while the private sector becomes stronger, or turn to the foreign private sector. Since the first alternative is a long-term solution, some countries, such as China, Viet Nam, Malaysia, Pakistan, Panama, Poland (Gdynia), etc., have chosen foreign private partners. The maximum proportion of foreign-owned capital allowed may be a policy issue in many countries and may deter some investors.

60. Monopoly, whether private or public, is the principal enemy of efficiency. Privatization should not be started if the result is to turn a public monopoly into a private one. The **promotion of competition** is central to the success of privatization. Port competition is found at three levels: between ports, between companies in the same port or between different modes of transport. With containerization and improvement of inland transport, more and more ports, even those in developing countries, are now

competing for a common hinterland. While international interport competition plays a major role in most cases, multiport countries should eliminate competition barriers between national ports. In many large ports, competition between different companies within the port has been maintained and encouraged deliberately by port authorities that allocate similar activities to different companies. If only one operator is engaged for the sake of economies of scale, competition can still be promoted between working units within the same organization, as has been done by ODEP.

61. While the removal of restrictive regulations is one of the conditions for privatization, the establishment of the **appropriate legal framework** is equally essential. First of all, labour-related regulations/legislation should be updated. In Peru, for instance, the Government issued decrees in 1991 ending a state-owned monopoly which had controlled the provision of port labour for 55 years, during which time clients had to pay extremely high stevedoring charges (in 1990 clients paid US$ 1,000 per month per worker to the monopoly even though workers were receiving only US$ 130 per month). Stevedore charges for loading refined and concentrated metals at the port of Callao immediately dropped over 76 per cent.[16] Legislation concerning bankruptcy, lay-offs, social security and legislation in connection with sales of assets and equipment (property law) should be established or updated. Compared with the industrialized countries, most developing countries and former centrally planned economies have inadequate legal legislation. Building the necessary legal framework is often time consuming because it needs to pass through several phases, such as investigation, drafts, debates, adjustments, approval, implementation and sometimes modification.

62. Privatization often leads to improvement in productivity which means that the same amount of work is done with fewer people, or that the same number of people do more work. **A good economic situation** (high growth rate of national economy and trade) is helpful to keep or even increase the number of port workers during and after port privatization (as in Port Klang), while in a poor economic situation it is difficult to avoid lay-offs. While lay-offs are often inevitable, it has been shown that large-scale lay-offs, or even their possibility, with no adequate social security system or compensation package, leads to social instability, which in turn blocks or ruins the privatization programme. Consequently, a progressive approach is more acceptable where over staffing and other problems can eventually be alleviated or solved through more moderate reform measures, such as deregulation and commercialization. Thus a **social security system or compensation package** is required for redundant labour. Privatization will often attract new activities or may exploit unused facilities for new non-port related uses which generate more employment.

63. Privatization is a complex operation that needs the support and cooperation of various government departments and professional organizations. Conflicts of interest are often inevitable, so it is necessary to strengthen government commitment by establishing **effective implementation machinery** with clear mandates, adequate power and technical/financial resources for preparing and managing the privatization process. In Nigeria, for instance, the Government has set up a new body -- the Technical Committee on Privatization and Commercialization -- to help smooth the implementation of the public-sector reform. The chairman of the Committee reports directly to the president of the country, thus ensuring timely decision-making. Malaysia is another country with good machinery to smooth the implementation of privatization.

---

[16] ECLAC, *The restructuring of public-sector enterprises: the case of Latin American and Caribbean ports*, (LC/G.1691-P), 1992, p.65-66.

64. The above are the main conditions for different measures for port institutional reform. Particular measures for implementation should be taken only when the major conditions for those measures are fulfilled; otherwise, efforts are more likely to fail. Some important points can be noted from the above analysis. On the one hand, there is a close relationship between the conditions for different reforms. The conditions for simpler restructuring measures, such as deregulation, are also required for the more complex and broader measures, such as privatization. While government commitment and a legal framework are conditions for higher-level measures, consensus building, for instance, is required for almost all forms of restructuring. On the other hand, simpler measures often become conditions for implementing more complex measures. Management modernization techniques could allow managers to acquire the necessary know-how and pave the way for deregulation. Deregulation, in turn, is, in most cases, a prerequisite for commercialization or privatization, and commercialization is, in a sense, a prerequisite for privatization. Figure 2 shows the major conditions needed for various reform measures and will determine the appropriate measure.

65. Most conditions for reforms can be built up systematically, but most, such as broad consensus, legal frameworks, strong private sectors, competitive markets, social security systems, etc., cannot be built overnight. The time required is often long and there is no easy way to accomplish them. Experiences from numerous countries have shown that there are no universal models for port reforms and an attempt to copy another's success often leads to failure. Each country and each port is particular. The best way to build the conditions for reform is through a gradual step-by-step approach of training, setting objectives, revising legislation, improving communications, promoting competition and building consensus.

IV. PORT ENVIRONMENT ASSESSMENT AND REFORM STRATEGY

66. Sometimes port reformers are perplexed by the many choices of measures for port reform. There is often agreement on the need for port reform but disagreement on which measures to take. Some reformers are totally opposed to port privatization and prefer commercialization or deregulation, while others consider all forms of privatization as the only solution. There are others who argue that the focus should be on managerial modernization rather than radical institutional measures, such as commercialization or privatization. It may seem that reformers have many alternatives, but in reality, however, this is not the case. For taking decisions, reformers have to understand what conditions the port actually has and will have in the near future.

A. Assessment of port environment

67. Each restructuring reform requires specific conditions, as explained in chapter III. A thorough assessment of the port environment allows reformers to know whether the port meets the conditions required. The assessment should consider various factors -- political, economic, social, operational, technical, etc.. In a recent UNCTAD study,[17] a systematic method was proposed to appraise and assess the port's external and internal environment.

68. Assessment of the port's **political environment** will determine whether the restructuring measures are in line with government policy. If not, radical measures like commercialization or privatization

[17] UNCTAD, *Strategic planning for port authorities*, (UNCTAD/SHIP/646), July 1993, chap.III.

should not be attempted because there may be a lack of government commitment. Even if the government has embarked on profound institutional reforms, it is necessary to examine whether the port sector is a priority. The port's current institutional situation should also be assessed to determine its management level, to verify whether it has been deregulated, to check whether reform efforts (e.g. commercialization, privatization) have already been made and what the results were.

69. Four aspects of the port's **economic environment** need to be assessed to determine: whether general national economy, trade and maritime traffic have grown; whether the port market is competitive and how much competition can be promoted; the financial situation (costs, tariff, balance sheet); and the strength of the private sector in the port, in transport-related businesses and in the country.

70. **Labour aspects** also need to be assessed. Before restructuring, the port should be aware of its labour situation: what the employees' attitudes are towards institutional reforms, including commercialization and privatization (favourable, hostile or indifferent); whether the port is overstaffed; whether unemployment is a serious problem in the region/country; whether there is a social security system and whether it is adequate; what financing is available for redundancy payments; how strong the trade union is and what the impact would be if the port began large-scale lay-off programmes; what are the educational background and age distribution of the labour force; what are the alternatives to lay-offs; what is the institutional feature (or reforms) of other major industrial or service activities in the country and city and their impacts on the port; and what are the attitudes and influence of interested social groups and port clients.

71. The assessment should also be done at the **operational/technical level** to examine the traffic characteristics: the proportion between liquid bulk cargo, dry bulk cargo, breakbulk and containerized general cargo; the volume of traffic, handling features and the size of the operational unit (with limited traffic and thus limited cargo-handling equipment -- a single container gantry crane, for example -- it would be difficult to introduce intraport competition); the safety record (an indicator of management and labour skills); the management and operational know-how; the size and skill of the workforce; and the infrastructure and equipment available.

72. After assessing the environment of the port organization, the port should be compared with the conditions required for restructuring measures. It then becomes clear which measures should be selected. However, this assessment does not take into account the impact of restructuring measures, which should also be assessed.

B. Benefits and risks of restructuring measures

73. The assessment of the effects of various restructuring measures is significant because the conditions the port lacks for a particular measure can sometimes be created by implementing this very measure. For instance, when competition is a prerequisite for deregulation measures, the port in a non-competitive environment can introduce deregulation, if it has been designed to create a competitive environment. Similarly, putting a restructuring measure in place can sometimes eliminate existing conditions. For example, the technical and reorientation training system may collapse after the port has been deregulated, commercialized or privatized. The benefits and risks of restructuring measures should be taken into consideration before the most appropriate measure is selected.

74. The major benefits and risks of restructuring measures have been analysed previously. Even though there are advantages and disadvantages for every measure in each country and port, the basic benefits and risks are mostly the same for each restructuring measure, which seeks to create more market responsiveness and at the same time introduces some risks to job security and to government control. The real difference between the various restructuring methods is the degree of the change. While milder measures such as management modernization will have limited impacts on the port organization, both with regard to benefits and risks, more radical measures, such as privatization would, on the other hand, lead to greater changes -- both positive and negative.

75. Consequently, when choosing the measures, one could consider whether to maximize the benefits or to minimize the risks. Experience has shown that it may be dangerous to take a pure benefit-maximizing policy because the risks could be too big to be controlled and the benefits could be largely offset. The conditions for implementing various restructuring reforms, with different kinds and degrees of risk, depends on the organization's ability to handle risks. A risk-minimizing policy is not advisable either as in reality it may ignore the real problems and the whole process may become a waste of time and resources. The right approach is to balance the two elements by *maximizing the benefits to the extent that the risks are under control* and should be one of the considerations for identifying the most suitable restructuring measures.

C. Strategic choice for reform measures

76. In one country, different forms of restructuring can be employed at the same time because the environment differs from port to port and different conditions are appropriate for different measures. The Malaysian Government, for example, adopted different strategies for its ports: privatization was established in Port Klang and corporatization in Johore Port. This is also why ports with different institutional features may have similar levels of performance and efficiency, such as a totally privatized port, like Hong Kong, and a public port, like Singapore. On the other hand, similar measures can lead to different results.

77. Since the port environment is continually changing, various forms of restructuring can be employed at different times. In the United Kingdom and in New Zealand, ports which had been corporatized were later privatized. The corporatization in the United Kingdom of the BTDB was done as a good business practice in 1963 and privatization evolved later when the Government changed in 1979. The corporatization of Johore Port was designed as a step towards further reforms. In fact, a progressive approach is recommended with a sequence of different restructuring measures, starting with milder ones which can create the necessary conditions and the capability to handle risks so that the reform process could take more drastic measures when necessary. Successful experiences in port reform have influenced the port to take into account the conditions for each restructuring measure, as well as the associated benefits and risks.

78. Reformers should prepare a master-plan with a strategy for the restructuring. The process may take many years and consist of several different measures. A thorough analysis and assessment should be undertaken to determine the position of the port in the context of various port-restructuring measures, the associated benefits and risks, as well as the prerequisites. Only then should the strategy be devised. However, the fact that the port environment is continually changing must be borne in mind. Figure 3 shows the relationship between the port's position, determined by the assessment as well as by the conditions fulfilled, and the corresponding port restructuring measures that are suitable for the port.

Box 2. Rationale behind Malaysia's approach to the privatization of Port Klang

The Malaysian Government's approach to privatizing Port Klang's operational services was based on the following:

i) It is a large port with multiple activities involving 26 berths, handling approximately 29 million tonnes of cargo (1992) and with employing about 4,800 workers.

ii) It is the major gateway to Malaysian trade.

iii) It has embarked on a major expansion programme. Investment in the first and second phases alone will be over RM 580 million (approximately US$ 215 million).

It was felt that the port was large enough to be privatized to more than one party, and where possible, with specialized activities. Furthermore, in view of the large investment in the expansion programme, it will be appropriate for the Government to develop facilities to ensure trade and the growth of the export market.

In principle, the Government took the view that the day-to-day operations, i.e. ship and cargo handling, be left to the private sector. Once the operational elements are released from Government bureaucracy, the private sector will be able to concentrate on improving productivity through more effective utilization of the workforce, while upgrading the quality of service through more sophisticated and well-maintained equipment. It is the opinion of the Government that the joint effort to create a conducive commercial environment by the Government, combined with the efficient operation of the private sector, could lead to the transformation of the port as a potential load centre for the country. This will allow for direct ship calls at Port Klang at reasonable cost.

Source: Mr. Rajasingam, presentation at UNCTAD's Intergovernmental Group of Experts on Ports, October 1993, Geneva.

79. As an example, 10 ports are marked in various positions in figure 3, which indicates the particularity of each port. First, the port should be positioned vertically according to its efficiency and the level of the clients' satisfaction. This can be done by a comparison with efficient ports either on a global or regional basis and by client surveys. The closer the port's position to the bottom line, the poorer its performance and the more urgent is the need for reform. Then, the assessment of the port's environment and conditions for implementation will locate the port horizontally, which indicates the appropriate reform measures. Thus for port 1, managerial measures should be taken, while for port 10, privatization is the best approach. In reality, privatization does not necessarily mean efficiency. Commercialized public ports, such as the port of Singapore, can be very efficient and client friendly. Private ports can be inefficient due to, for instance, lack of competition, poor management or strict regulations.

V. IMPLEMENTATION, CONTROL AND ADJUSTMENT

80. When suitable measures have been identified, the reform can be implemented. Each port is specific, although other ports' experiences are often inspiring. Another problem in some cases is that the

improvements are not sustainable, even though it is believed that all port-restructuring measures aim at long-term and not short-term benefits.

A. Implementation techniques

81. The conditions for restructuring measures discussed in chapter III are drawn from the positive and negative experiences of countries, which have used various implementation techniques. Although in this study it is not possible to provide a systematic and exhaustive list of those techniques, the key elements are handling the risks associated with the reform measures. These risks can be divided into three categories: labour, finance and operations.

82. Labour relations are, in most cases, the principle origin of port-restructuring reforms. The general manager of Klang Port Authority stated that "one of the major considerations for a successful transfer from a Government environment to the private sector is peaceful industrial relations and employment terms for the workers." In this respect, the Malaysian Government has introduced a mandatory clause for all privatization/corporatization exercises: although the numbers of employees can be reduced, all employees who agree to move to the private sector or corporatized body are guaranteed employment for a minimum of five years with terms and conditions "no less favourable" than in the public sector. Port Klang was privatized without labour problems.[18] The Government gave priority to the labour issue, and officials at the highest level, including the prime minister, were directly involved in labour negotiations. However, Malaysia's experience was exceptional because it had been enjoying high economic and trade growth which gave redundant workers new job opportunities, and the port's traffic was growing rapidly. Other countries without such a favourable economic climate would have difficulties imposing such a mandatory clause as few companies, private or not, would be willing to accept the liability of a similar clause. In France, a compensation programme was established for the deregulation of port dockers. A redundant worker was either retrained or given financial compensation of around FF 450,000 (US$ 80,000). In New Zealand, a similar compensation system was established when the country's ports were corporatized in 1988-1989. This system has also been used in the United Kingdom following the abolition of the NDLS scheme. In addition, methods should be introduced which allow employees to benefit from their port's success, which could occur through profit-sharing, availability of a limited number of shares at a special price and management/employee buy-outs. These methods have had a positive impact on labour relations and on employees' attitudes and motivation.

83. All port reforms should be carried out with a high degree of transparency for both personnel and financial matters, which is an effective way of ensuring that the port organization is transferred to the right organization. Public tender is an essential tool for the transparency of personnel or organizational transfer and should also apply to the valuation of the port assets that are commercialized or privatized. There should be not only a financial valuation on the port's assets, but also an economic one on its commercial value or, in other words, on its present and potential capacity to generate revenue. Port authorities should seek expert advice to assist them in validation and tendering. For example, in the United Kingdom, the sales methods used for some of the trust ports resulted in limited competition and questionable valuation of the port business. After the sale, the rapid increase in the value of the shares showed that the Government had received insufficient compensation for its assets. Public tender, competitive auction and stock exchange listings are a means for the market to determine the value of the

---

[18] Speech of Mr. Rajasingam given at the UNCTAD Intergovernmental Group of Experts on Ports, October 1993.

assets. Consequently, timing is important to commercialize or privatize parts of the port. A suitable moment is when trade is growing and the port's cargo throughput is or will be increasing rapidly. A poor commercial situation will reduce the number of bidders and the port's commercial value.

84. Some preventive measures must sometimes be taken in case the port reform creates some negative impacts on operations. Such measures could, for instance, set up minimum performance standards (to avoid reducing service quality), exercise tariff control or an appeals procedure to contest certain charges (to avoid inappropriate tariff increases) and ensure an optimal use of port facilities (to prevent congestion, regulate exclusive usage, etc.). As an illustration, the first step of Port Klang's privatization programme was accompanied by a Government regulation of the port tariff. If cargo-handling equipment is being transferred as a result of privatization, a plan should be worked out to minimize the effects of unavailable equipment while it is being transferred.

Box 3. Example of guidelines for port privatization

The Indian Major Ports Trust Act of 1963 will have considerable effects on potential port or terminal operators. Any schedule of charges or tariffs will need to have prior sanction by the Government. The charges levied on the users for terminal services provided by operators would need to be within limits determined with the Government's approval. Operators will be required to guarantee a minimum level of performance. Operators will not be entitled to receive tax concessions or special treatment for their investments. The existing labour laws will apply to private operators.

Source: Containerization International, April 1995.

B. The changing role of port authorities

85. As port restructuring progresses, the port authority's role changes. In many countries, port restructuring is simply a transformation of the role of port authorities from operating port to landlord port (though between the two there are many intermediate forms). Landlord port authority can lease out facilities not only to private bodies, but also to the public (or mixed) entities. There are certain regulatory functions which should remain the responsibility of publicly owned port authorities, i.e. traffic management, harbour control, granting of concessions or leases, etc..

86. One issue is to decide what should be handed over to the private sector and what should remain at the port authority. The principle is a pragmatic approach, which means examining each of the port functions to determine which functions should be performed by the public sector and which ones by the private sector. This approach is called "privatization à la carte".[19] An examination of the various port functions for ships and cargo should be carried out considering the level of capital intensity, labour intensity, period of return on investment and maintenance required based, on the following table.

[19] UNCTAD, *The principles of modern port management and organization*, (TD/B/C.4/AC.7/13), 1992, pp.34-36.

Table
List of port facilities and services

Infrastructure
- Approach channel
- Breakwater
- Locks
- Berths

Superstructure
- Surfacing
- Storage (transit sheds, silos, warehouses)
- Workshops
- Offices

Equipment
- Fixed (ship-to-shore cranes, conveyor belts, etc.)
- Mobile (straddle carriers, forklifts, tractors, etc.)

Services to ships
- Harbour Masters office (radio, VTS, etc.)
- Navigational aids
- Pilotage
- Towage
- Berthing/unberthing
- Supplies
- Waste reception and disposal
- Security

Services to cargo
- Handling
- Storage
- Delivery/reception
- Cargo processing
- Security

87. This examination will differ from port to port since their commercial and technical features differ. On its completion, the port environmental assessment should be taken into account to determine whether the operational and financial capabilities of the private sector are good enough and whether a monopolistic situation can be avoided. *It is best to act pragmatically in treating each case separately, spacing the process out over time to experiment, leaving the door open to future evolution and privatizing each function when it seems to be the best solution and according to the best formula.*[20]

C. Control and upgrading/adjustment

88. After the measures have been implemented for a certain period, three results are possible: large and lasting improvements, small and temporary improvements, or deterioration. Positive results can be expected within a year or two, and the port's performance will start to improve. This means that the

[20] UNCTAD, *Technical Note: Port Privatization*; Ports Newsletter, No.6, November 1991.

measures are appropriate and, if the performance is sustainable, sufficient for an effective port reform. No notable improvement could mean that: either the measures were taken for creating necessary conditions for more radical reforms (such as management modernization, deregulation or commercialization adopted in many ports as preparatory steps for further reforms like commercialization or privatization), or the measures were inappropriate for the port and the conditions cannot be met. In both cases then, other restructuring measures are needed.

89. Reform can be carried out in stages over several years. In Port Klang, there were two stages of privatization: the container terminal was privatized in 1986, and the rest of the operational services in 1992. In the United Kingdom, the ABP was also privatized in two stages: in 1983, 51.5 per cent was privatized, and in 1984 the remainder was privatized, although the Government assumed a passive role in the interim. In New Zealand, the ports were corporatized in 1988 and in the second stage, privatized. The privatization process is still going on.

D. Sustainable efficiency

90. The economic environment has changed at different times in various parts of the world, and consequently, the nature of shipping and cargo and of port facilities: containerization first affected transatlantic routes in the late 1960s, then Europe/Far East and North America/Far East, but proceeded more slowly in South America and Africa. The evolution of the economic environment is now proceeding rapidly, and thus the needs of the market and the ports' clients are variable and changing fast; therefore, ports have to adapt themselves to their market. As the market never stops changing, port reform is by no means a once-and-for-all operation, but a continuous task and exercise. An efficient and competitive port is always changing -- from managerial modernization to technological innovations to institutional adjustments. For example, the port of Singapore is investigating and planning a privatization programme and the port of Antwerp is undertaking a commercialization programme of its port authority. This wave of port restructuring is occurring not only in developed countries but also worldwide. Ports and their environment should constantly be assessed. If ports are always to be vital and efficient, changes, including institutional changes, and adaptation should be a continuous process.

Figure 1
Interrelation of various measures in port organizational and institutional reform

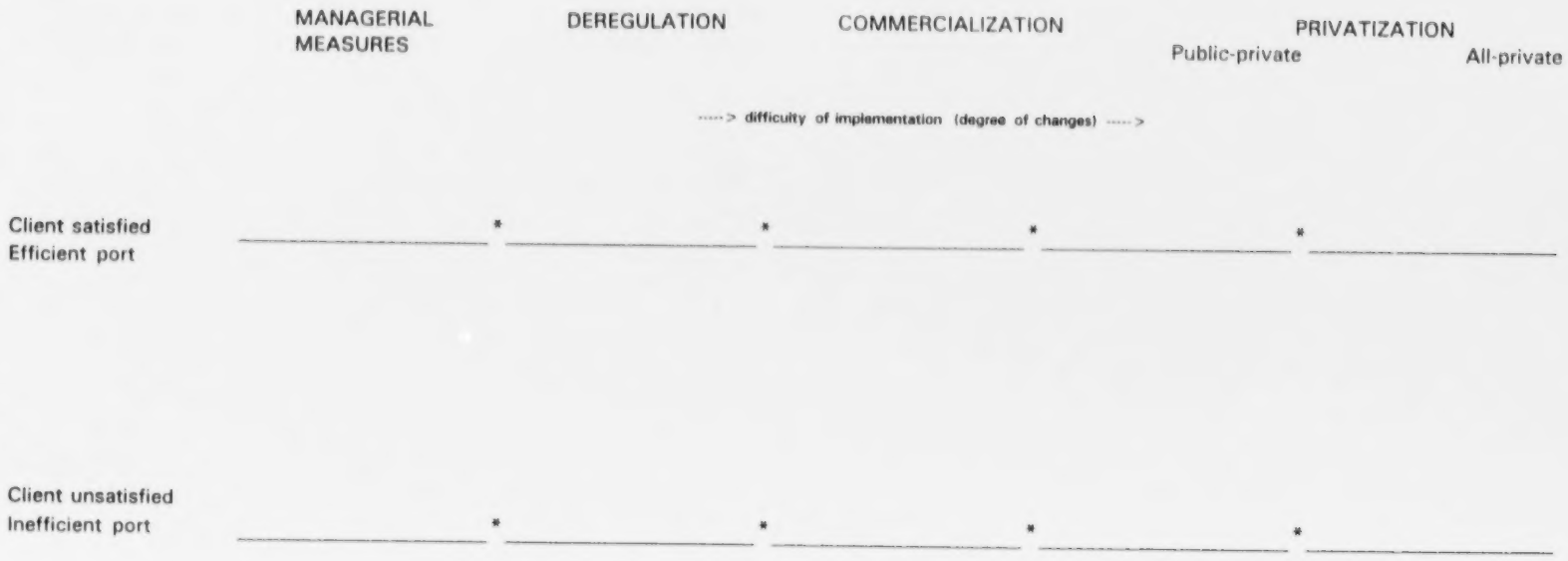


Figure 2
Various port restructuring measures and the conditions required for implementation

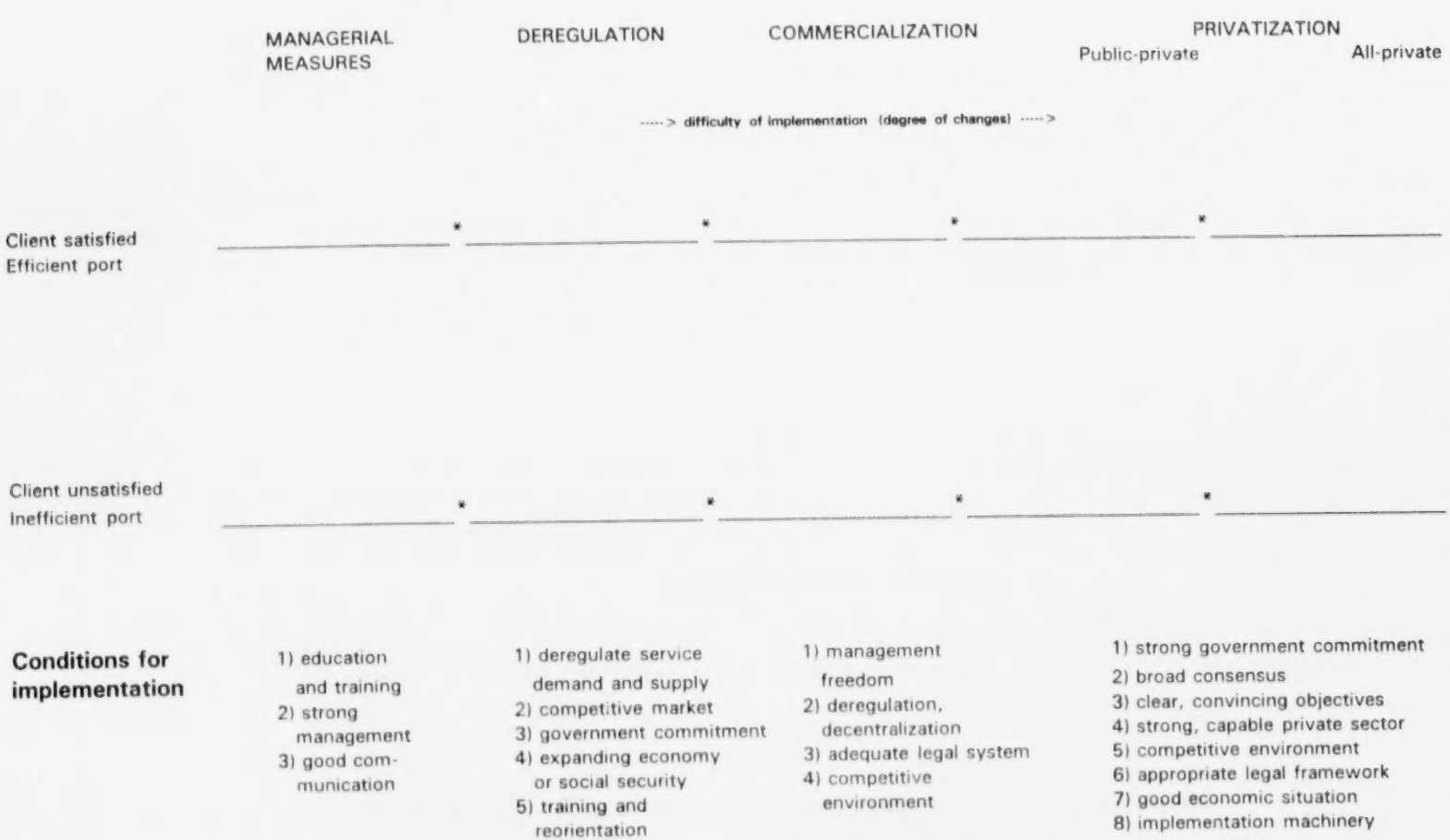
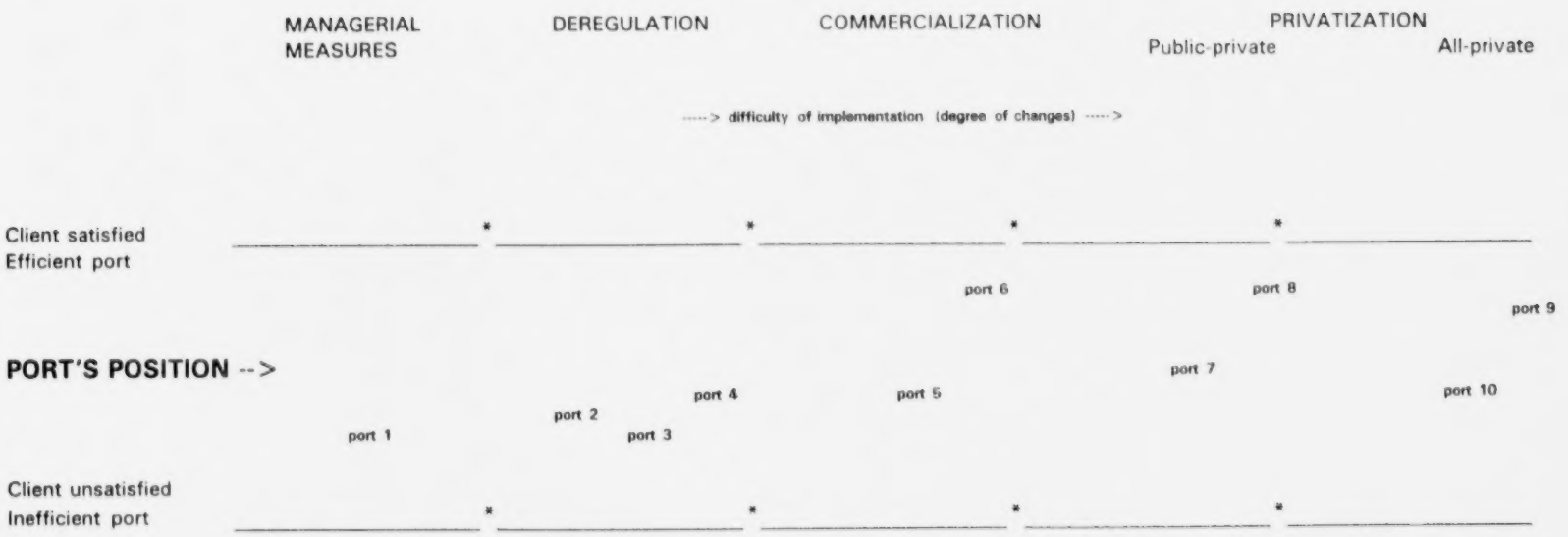


Figure 3
Port assessment and restructuring position



Conditions for implementation	1) education and training 2) strong management 3) good communication	1) deregulate service demand and supply 2) competitive market 3) government commitment 4) expanding economy or social security 5) training and reorientation	1) management freedom 2) deregulation, decentralization 3) adequate legal system 4) competitive environment	1) strong government commitment 2) broad consensus 3) clear, convincing objectives 4) strong, capable private sector 5) competitive environment 6) appropriate legal framework 7) good economic situation 8) implementation machinery